

**12 AUGUST 2002**



**Civil Engineering**

**EXCAVATION AUTHORIZATION  
PROCEDURES**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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(SSgt Vernon S. Neckermann)  
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Certified by: 90 CES/CC  
(Lt Col Steven W. Ditmer)  
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This instruction establishes guidelines for protecting underground utilities at Francis E. Warren Air Force Base and outlying facilities. It applies to all 90th Space Wing and subordinate units assigned, attached, or supported by the 90th Space Wing, Francis E. Warren Air Force Base. Maintain and dispose of records created as a result of prescribed processes in accordance with AFMAN 37-139, *Records Disposition Schedule* (will become AFMAN 33-322 Vol. 4). Comply with AFI 33-332/AFSPC Sup 1, *Privacy Act*, for documents containing privacy act information. For official use only information, comply with DoDR 5400.7, *DoD Freedom of Information Act Program*, Air Force Supplement/AFSPC Sup 1, Chapter 4. IAW AFI 33-360V1, 90 SW SUP 1, paragraph 1.9., the 90 SPTG/CC is designated approving authority for this publication. The signature block remains that of the 90<sup>th</sup> Space Wing Commander.

**SUMMARY OF REVISIONS**

This publication includes numerous changes and must be completely reviewed. Adds the purple color code (paragraph [4.1.8.](#)) and office symbols have been updated throughout the publication.

**1. Excavation.** The term excavation is defined as any breaking of the ground.

**2. Focal Points:**

2.1. Base Civil Engineers Customer Service Section, 90 CES/CEOC, building 318, extension 3227, is the focal point for processing all AF Forms 103, *Base Civil Engineer Work Clearance Request* (90 CES/CEO Overprint) (see [Figure 1.](#)).

**Figure 1. Sample AF Form 103, Base Civil Engineer Work Clearance Request (90 CES/CEO Overprint)**

CE Permit # \_\_\_\_\_

\*PLEASE NOTE ATTACHED COLOR CODE CHART

BASE CIVIL ENGINEER WORK CLEARANCE REQUEST <small>(See Attached Instructions)</small>				Date Prepared	
<p>1. Clearance is requested to proceed with work at _____</p> <p>on Work Order No. _____ Contract No. _____ involving excavation or utility disturbance per</p> <p>attached sketch. This area <input type="checkbox"/> has <input type="checkbox"/> has not been staked or clearly marked. <span style="float: right;">ONE CALL # _____ DATE: _____ TIME: _____</span></p>					
2. TYPE OF FACILITY/WORK INVOLVED					
A. PAVEMENTS		D. FIRE DETECTION & PROTECTION SYSTEMS		G. AIRCRAFT OR VEHICULAR TRAFFIC FLOW	
B. DRAINAGE SYSTEMS		E. UTILITY		H. SECURITY	
C. RAILROAD TRACKS		F. COMM		I. OTHER	
3. DATE CLEARANCE REQUIRED			4. DATE OF CLEARANCE TERMINATION		
5. SIGNATURE OF REQUESTING OFFICIAL			6. TELEPHONE NO.		7. ORGANIZATION
ORGANIZATION		REMARKS (Use Reverse for additional comments)		REVIEWER'S NAME AND INITIALS	
B A S E  C I V I L  E N G I N E E R	A. ELECTRICAL DISTRIBUTION		INFRASTRUCTURE		
	B. STEAM DISTRIBUTION				
	C. WATER DISTRIBUTION				
	D. POL DISTRIBUTION				
	E. SEWER DISTRIBUTION				
	F. ENVIRONMENTAL				
	G. PAVEMENTS/GROUNDS				
	H. FIRE PROTECTION		CALL 3175 PRIOR TO BLOCKING ANY ROADWAYS		FIRE DEPARTMENT
	I. CATHODIC PROTECTION				
	J. EMCS				
9. SECURITY POLICE		OK		SECURITY FORCES	
10. SAFETY					
11. COMMUNICATIONS					
12. ENGINEERING		VERIFY ALL UTILITIES THROUGH DRAFTING MAPS		ROD TREES	
13. CABLE TV					
14. COMMERCIAL UTILITY COMPANY					
TELEPHONE QWEST					
GAS CLFP					
ELECTRIC CLFP					
15. OTHER (Specify) GROUNDS MAINT. _____ B.O.P.U. _____					
16. REQUESTED CLEARANCE <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED					
17. TYPED NAME AND SIGNATURE OF APPROVING OFFICER (Chief of Operations Flight or Chief of Engineering Flight)					17. DATE SIGNED

AF FORM 103, 19940801 (EF-V3)

PREVIOUS EDITION IS OBSOLETE

OVERPRINT 90 CES/CEOC-103

2.2. Communications Maintenance Control, 90 CS/SCMJC, extension 3101, is the coordination focal point for all underground communications lines.

2.3. Combined underground location service (Wyoming One-Call) is the coordination focal point for commercial utility and off-base commercial telephone companies. All Wyoming One-Call requests will be made by 90 CES/CEOC. Individuals and contractors must not call Wyoming One-Call for locates.

### 3. Procedures:

3.1. Coordinating AF Form 103 Overprint (OP) (see [Figure 2.](#)). Base Civil Engineers Customer Service (CEOC) will hand-carry the form to all the required base agencies for coordination and contact Wyoming One-Call for the requester.

3.1.1. Each agency with utilities in the area of excavation will annotate the AF Form 103 OP, “utilities in area – call (shop phone numbers) 2 duty days prior to excavation to schedule locates,” and will not sign the form.

3.1.2. Areas of excavation that are clear of utilities will be marked “clear” and signed in the appropriate block for that agency.

3.1.3. All areas on the AF Form 103 OP marked “utilities in area – call to schedule locate” will be highlighted with fluorescent yellow highlighter and a “RED” asterisk.

3.1.4. Once all agencies have reviewed the AF Form 103 OP and made the appropriate annotations, CEOC will notify the requester that form is ready for pick up at building 318.

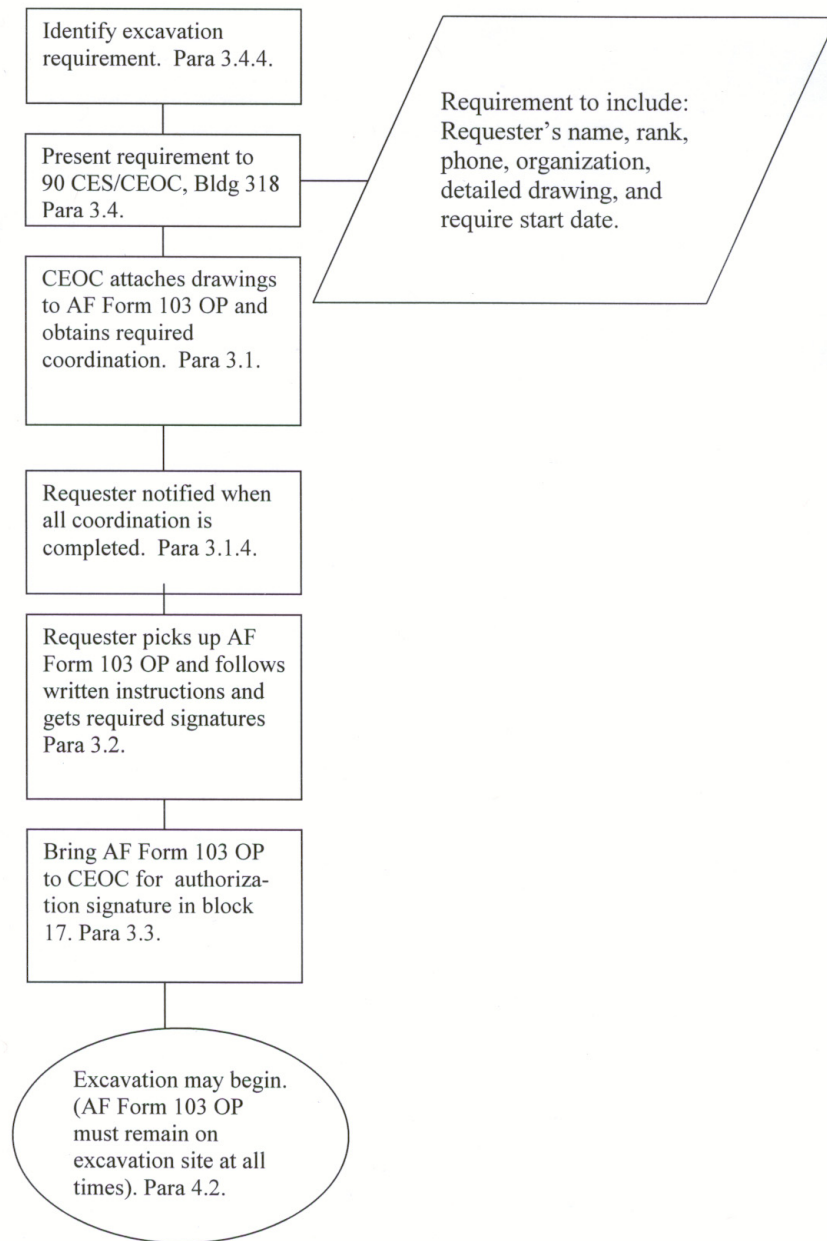
3.2. The annotated AF Form 103 OP does not constitute a valid AF Form 103 OP. It is the sole responsibility of the inspector/requester to contact each agency and arrange a meeting on the excavation site with the locator to verify the exact location of on-base utilities.

3.3. When the locator and the inspector/requester have identified the exact area of excavation and the locator has marked and signed the corresponding block on the AF Form 103 OP, the form is to be returned to CEOC for approval signature. When signed by authorized CEOC personnel, the form is valid and excavation may begin.

3.4. All requests for digging on FEW and the associated missile sites are submitted to 90 CES/CEOC, building 318.

3.4.1. Routine work requests should not be submitted more than 7 duty days prior to the required excavation start date.

**Figure 2. Coordination Process of AF Form 103 (90 CES/CEO Overprint).**



3.4.2. Normal processing time for routine requests is 3 to 5 duty days.

3.4.3. Emergency requests required to correct conditions that are detrimental to the mission or reduce operational effectiveness are usually processed within a few hours. An emergency includes, but is not limited to, the total failure of the electrical, fire protection, telecommunica-

tions, heating and air conditioning or security alarm systems and situations which would result in imminent or catastrophic damage to facilities and/or persons.

3.4.4. Requesters must provide the following information, when submitting a digging permit request:

3.4.4.1. A drawing of the excavation area.

3.4.4.2. Purpose of the excavation.

3.4.4.3. Name, phone number and organization/business of the requester.

3.4.4.4. Date excavation is expected to commence.

3.4.4.5. Ensure proposed excavation site is physically marked with white paint or flags.

3.5. Agencies required for coordination of AF Form 103 OP are:

3.5.1. 90 CES utility shops.

3.5.2. 90 CES Environmental/90 SW/EM.

3.5.3. Wing Safety (90 SEG).

3.5.4. Security Forces (90 SFS).

3.5.5. Base Cable RSI (Contractor).

3.5.6. Wyoming One-Call (includes QWEST Communications, Cheyenne Light, Fuel and Power, and local cable companies).

3.5.7. US Grounds Maintenance Contractor.

#### **4. Utility Marking Codes:**

4.1. All utilities in the vicinity of the excavation will be physically located and marked with fluorescent paint using the following underground utility color codes:

4.1.1. RED. Electric power lines, cables, conduits and lighting cables.

4.1.2. YELLOW. Gas, oil, steam, petroleum or gaseous materials.

4.1.3. ORANGE. Communications, alarm/signal lines, cables/conduit and CATV.

4.1.4. BLUE. Water, irrigation or slurry lines.

4.1.5. GREEN. Sewers and drain lines.

4.1.6. WHITE. Proposed excavation.

4.1.7. PINK. Reserved for surveying purposes only.

4.1.8. PURPLE. Reclaimed water, irrigation, slurry lines.

4.2. Original signed AF Form 103 OP or a copy of the signed original must remain on site at all times during excavation.

#### **5. Responsibilities:**

5.1. Civil Engineers will:

- 5.1.1. In the event of damage to any utility, notify the appropriate agencies.
- 5.1.2. Be the agency of primary responsibility for any excavation. Any individual, agency, or contractor must comply with all directives from the Base Civil Engineer.
- 5.1.3. Investigate and provide findings to the appropriate agency if a utility is cut or damaged.
- 5.1.4. If a utility is cut or damaged by a contractor, bring the matter to the attention of the Base Contracting Squadron, 90 CONS, extension 3535. Only 90 CONS is authorized to contact the contractor about repair and/or recouping Air Force losses.
- 5.1.5. Notify Cathodic Protection, extension 2792/Corrosion Control Engineer, extension 2650, when any utility is uncovered. Any detected leak will require completion of AF Form 1687, Leak/Failure Data Record.
- 5.1.6. Accurately and promptly locate scheduled AF Forms 103 OP within 2 duty days of notification of a locate request.
- 5.2. The Communications Squadron will:
  - 5.2.1. Investigate and provide findings to the appropriate agency if any utility line is damaged by Engineering Installation (EI) teams or contractors.
  - 5.2.2. Accurately and promptly locate scheduled AF Forms 103 OP within 2 duty days of notification of locate request.
- 5.3. Excavators will:
  - 5.3.1. Stop work immediately when an unidentified or unlocated utility is discovered.
  - 5.3.2. Notify 90 CES/CEOC, extension 3175, whenever a utility or cable is unidentified, unlocated, or damaged. Work will not begin until owner of utility has corrected problem on site.
  - 5.3.3. Marked utilities will be physically located by hand digging (potholed) prior to any excavation that involves using equipment within 24 inches of any buried utility. This is in accordance with Wyoming One-Call.
  - 5.3.4. Hand-dig 36 inches from all telecommunications utilities.
  - 5.3.5. Any excavation attempted without a proper digging permit may subject excavator to liability for reimbursement.

THOMAS D. SHEARER, Col, USAF  
Commander, 90th Space Wing